**Commonwealth of Kentucky**
**Division for Air Quality**

# *PERMIT STATEMENT OF BASIS*

FINAL
Conditional Major, Construction / Operating
Permit: F-07-006
Messier-Bugatti USA LLC

April 25, 2007
Vahid Bakhtiar, Reviewer

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| SOURCE ID: | 21-015-00125 |
| SOURCE A.I. #: | 137 |
| ACTIVITY ID: | APE20060003 |

**SOURCE DESCRIPTION:**

Messier-Bugatti USA LLC manufactures aircraft brake pads using carbon vapor infiltration (CVI) for depositing graphite on a prepared carbon substrate. A substrate felting operating uses pre-oxidized acrylonitrile fiber to make brake pad pre-forms. The resulting brake pads are initially carbonized in a two-stage process in separate high temperature carbonizing furnaces. The initial stage (furnace) vents to a thermal oxidizer. The brake pads are then placed in high temperature CVI furnaces for the carbonization process, where a mixture of propane and natural gas is circulated for an extended period of time. The furnace exhaust is through a steam vacuum ejector/barometric condenser system with non-condensable hydrocarbon gases being burned in a steam boiler to produce steam for the process. A cooling tower re-circulates contact cooling water to the process and an emergency generator is available for orderly shutdown of the furnaces in case of power failure. The facility also operates an emergency diesel pump engine for the cooling towers and a natural gas fired standby boiler.

**PUBLIC AND U.S. EPA REVIEW:**

On March 15, 2007, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in Florence Recorder in Boone, Kentucky. The public comment period expired 30 days from the date of publication. Comments were received from Messier-Bugatti USA LLC on April 23, 2007. Comments and Division's responses are in this document. On April 23, 2007, the Division was notified that A-Carb LLC has changed its name to Messier-Bugatti USA LLC.
The Division also made changes for Carbonizing Furnaces in Section B, 3.Testing Requirements. The waste stream from the existing carbonizing furnace #490 is combined with the waste stream from new carbonizing furnace #483 before entering existing thermal oxidizer #2. Hence, the permittee shall conduct the VOC destruction efficiency test for new thermal oxidizer #3 and existing thermal oxidizer #2.

*Comments received*

Comments were received from Messier-Bugatti USA LLC on April 23, 2007. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed.

Detailed explanations of the changes made to the permit are as the following:

1. Front Cover – This company changed its name from "A-Carb LLC" to "Messier-Bugatti USA LLC." Enclosed is the completed DEP7007AI Form.

*Division's response: Comment acknowledged. Change made.*

2. Section B, Specific Monitoring Requirement 4.d (Page 3 of 28) for the IM, FM and RFPC units – Respectfully request requirement 4.d to read as follows:

   "*Pressure drop shall be monitored daily when the units are in operation. If the pressure drop is not within the normal operating range, an inspection of the system shall occur."*

*Division's response: Comment acknowledged. Change made.*

3. Section B, Specific Recordkeeping Requirement 5.d (Page 4 of 28) for the IM, FM and RFPC units – Respectfully request requirement 5.d to read as follows:

   *"A monitoring log shall be kept of the daily baghouse pressure drop when the units are in operation."*

*Division's response: Section B.5 is for Specific Recordkeeping Requirements. 5.d will change as:*

   *"A log shall be kept of all daily record of pressure drop of baghouse and the results of inspection when an inspection is performed."*

4. Section B, Operating Limitation 1.a (Page 5 of 28) for the Carbonizing Furnaces – Respectfully request requirement 1.a to read as follows:

   "*For the thermal oxidizers, the permittee must: (i) Demonstrate initial compliance for each thermal oxidizer through performance tests; (ii) Establish the operating limits for each thermal oxidizer during performance testing; and …"*

*Division's response: Comment acknowledged. Change made. Since capture and thermal oxidizer are part of the system , there is no need to test the capture efficiency.*

5. Section B, Specific Monitoring Requirement 4.b (Page 6 of 28) for the Carbonizing Furnaces – Respectfully request requirement 4.b to read as follows:

   "*The permittee shall monitor the chamber temperature of each thermal oxidizer on a continuous basis when being supplied by Carbonizing Furnace effluent."*

*Division's response: Comment acknowledged. Change made as the following:*

   *"The permittee shall monitor the chamber temperature of each thermal oxidizer on a continuous basis when carbonizing furnaces are in operation."*

6. Section B, Specific Recordkeeping Requirement 5.b (Page 6 of 28) for the Carbonizing Furnaces – Respectfully request requirement 5.b to read as follows:

   *"Thermal oxidizer chamber temperature shall be recorded on a continuous basis when being supplied by Carbonizing Furnace effluent."*

*Division's response: Comment acknowledged. Change made as the following;*

*"Thermal oxidizer chamber temperature shall be recorded on a continuous basis when carbonizing furnaces are in operation."*

7. Section B, Specific Recordkeeping Requirement 6.a (Page 6 of 28) for the Carbonizing Furnaces – Respectfully request requirement 6.a to read as follows:

   *"… 3 hours during which the average chamber temperature …"*

*Division's response: Comment acknowledged. Change made.*

8. Section B, Specific Control Equipment Operating Condition 7 (Page 7 of 28) for the Carbonizing Furnaces – Respectfully request requirement 7 to read as follows:

   *"…the average chamber temperature demonstrated during the most recent …"*

*Division's response: Comment acknowledged. Change made.*

9. Section B, Description – 12 Infiltrating Furnaces #501 - #512 (Page 8 of 28) – Respectfully request the description to read as follows:

   *"Construction commenced: (#501 - #504) September 10, 1998, and (#505 - #508) January 26, 2001, and (#509 - #512) are to be installed before the expiration date of this permit."*

*Division's response: Comment acknowledged. The division does not agree with this change. Pursuant to 401 KAR 52:030, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. See Section G, 4(c) of the permit.*

**COMMENTS:**

Prior to this application, A-Carb has been operating under State Origin Permit S-01-026 since February 21, 2001. A-Carb is requesting to install several new emission units and addition of new construction. A-Carb is proposing to construct 1 new thermal oxidizer #3, 2 new Carbonizing Furnaces #442 and #483, 4 new infiltration furnaces #509-#512 (CVI), 1 new Boiler #3, 1 new Cooling Tower (having two components), 1 new Anti-Oxidant Coating Line consisting of 2 booths and 2 drying ovens, 1 new NDT Coating Line consisting of 3 booths, 1 new Paint Line consisting of 2 booths and 2 drying ovens, 2 new Turning and 2 new Milling machines, 1 new Deurring Station, and 1 new Shot Pen. With the addition of the new units the uncontrolled potential to emit are above major source threshold levels. However, actual emissions will be well below major source threshold levels because each unit is controlled at all times when the process is in operation. The plant source-wide potential emissions of criteria pollutants show that A-Carb is no longer qualifying for a State Origin Permit and a Conditional Major Permit is required since the facility takes the emission limits to become an area source. A-Carb had claimed confidentiality to their processing information and the claim was approved on October 9, 2000.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

1. Volatile organic compound (VOC) emissions shall not exceed 90 tons per year based on a 12 month rolling total for the entire source to preclude a major source Title V review.

2. Hazardous air pollutants (HAPs) emissions shall not exceed 9 tons per year individually and 22.5 tons per year combined based on a rolling 12-month total for the entire source to preclude a major source Title V review.

3. Particulate matter (PM) emissions shall not exceed 90 tons per year based on a 12 month rolling total for the entire source to preclude a major source Title V review.

4. NOx emissions shall not exceed 90 tons per year based on a 12 month rolling total for the entire source to preclude a major source Title V review.

**OPERATIONAL FLEXIBILITY:**

None

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.